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## A NEW HOST FOR CLAVICEPS

HERBERT GROH

While making an examination of a quantity of wild hay received from Beauce County, in the province of Quebec, Canada, in December, 1909, I discovered that occasional spikes of a *Carex*, which constituted a large part of the hay, contained sclerotia of *Claviceps*. Suspecting this to be an exceptional host for the fungus, I made a search of the literature on the subject, with the result that I was unable to discover any record of a similar occurrence. Attempts were made to study the germination of the sclerotia, with a view to observing their further development, but, unfortunately, without success. The specimens were kept on moist, sterile sand in a Petri dish under ordinary living-room conditions of temperature, but, even after a lapse of several months, they had failed to develop stromata. Nothing is known of the history of the hay with which they had been gathered, and I have no doubt that age or the conditions of storage had influenced their power of germination. As no prospect remains now of gaining any more information about this interesting species, it seems advisable to put on record at least the fact of its discovery on *Carex*.

The sedge on which the sclerotia were found was identified as *Carex stellulata* Good. var. *angustata* Carey. Other Cyperaceae, including a number of other species of *Carex*, *Scirpus* and *Eriophorum*, and also a number of agricultural and wild grasses, were present, but on none of these were any sclerotia observed.

The appearance of the sclerotia *in situ* is shown in the accompanying drawing of representative specimens. Both macroscopically and microscopically, they are not unlike those occurring on grasses, and are undoubtedly *Claviceps* sclerotia. Their size varies from scarcely larger than the healthy perigynia to 5 mm. or more in length. Many of the smaller specimens appear to retain the features of the displaced perigynia at their tips.

With only this single stage of the fungus known, it is, of course, impossible to reach any conclusion as to its specific posi-

tion. It is not unlikely that it may be related to *Claviceps nigricans* Tul. occurring on *Eleocharis* and *Scirpus*, which are, I believe, the only members of the Cyperaceae at present recorded as being attacked by *Claviceps*. In this connection, mention may be made of a fungus described by Griffiths in the *Bulletin of the*

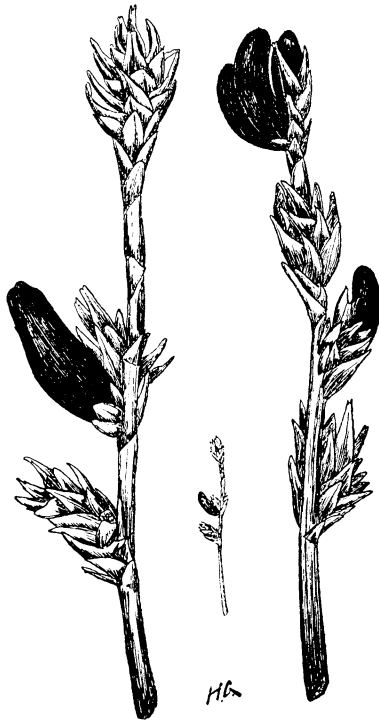


FIG. 1. Sclerotia of *Claviceps* on *Carex stellulata angustata*.  $\times \frac{3}{2}$ .

*Torrey Botanical Club*, Vol. 29, p. 300, and referred doubtfully to *Claviceps*. The sclerotial bodies there described were found, not on the reproductive organs, but inside the culms of the host, which was *Carex nebraskensis* Dewey. Through the courtesy of Dr. Griffiths I have been enabled to examine his specimens, which I find are clearly distinct from the ones under consideration here. They proved to be *Sclerotium sulcatum* Desm. (*Ann. Sci. Nat.* III. 16: 329. 1851), with the conidial stage *Epidochium ambiens* Desm. (See Brefeld, *Mycol. Unters.* 10: 317). The detached sclerotia of the fungus certainly resemble ergot grains very closely. The fungus of Dr. Griffiths was kindly determined by Mr. H. T. Güssow, Dominion Botanist.